



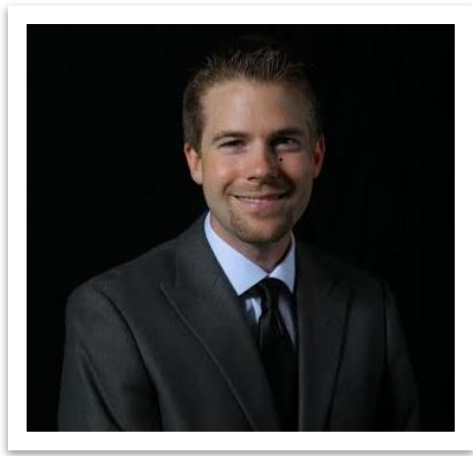
Blockchain, Web3, AI and the Accounting Profession

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Introduction



Presenter: Herb Rubenstein, JD, MPA, PGA
Herb@herbrubenstein.com

- Attorney, Author, Educator, Consultant, PGA Member
- Over 60 courses delivered for Encoursa for Accountants
- Former Lecturer, University of Colorado Graduate School of Business
- AI user, Crypto owner, and former Senior Research Associate at the American Institutes for Research in the Behavioral Sciences

Learning Objectives

01

Understand Web 3, AI and Blockchain from a technical and business perspective

02

Learn how Web3, AI and Blockchain 's component parts and ecosystem create value in the marketplace

03

Identify key Web3, AI and Blockchain opportunities for you and your future in the accounting profession

04

Learn from real world examples, "use cases," you can leverage

05

Discussion of FASB, AICPA and SEC Rules regarding Web3/Blockchain/AI and International Rules



***What is Web3, AI and
Blockchain?***

Polling Question 1

I would rate my familiarity with Web 3, AI and Blockchain as:

- A.** Had not heard about Web3, AI and Blockchain before this webinar
- B.** Novice, very early stage
- C.** Have been following Web3, AI and Blockchain for years
- D.** Expert in Web3/Blockchain/AI Practices and Ecosystem



Key Terms in the Web3 Ecosystem

A statue of a hooded figure, possibly representing a miner or a person in the crypto space. The figure is wearing a dark hood and a dark tunic. On the chest, there is a circular emblem with the Bitcoin symbol (a 'B' with two vertical lines). The background is a blurred outdoor setting.

- History and explanation of what is different in Web 3 compared to Web 2 and Web 1
- Blockchain
- Metaverse
- Cryptocurrency and crypto wallets
- Decentralized Exchanges
- DeFi and CeFi
- Ethereum as a platform including ERC 20, 721 and 1155
- Merge
- Mining
- Nodes
- Stable Coins
- Artificial Intelligence
- Distributed Autonomous Organizations
- Smart Contracts
- Non-fungible Tokens
- Collateralization

Blockchain: A Little Relevant History

- In 2008 – Satoshi Nakamoto publishes a paper about peer-to-peer transfer of money without an intermediary and creates “bitcoin” – with every transaction linked to the previous transaction and no way to change previous entries (immutable) and forming a “public ledger” of all transactions to eliminate people on the internet spending an internet based, digital currency, twice.

Blockchain: The History

A Blockchain is a type of Digital Ledger Technology (DLT) that consists of growing list of records, called **blocks** that are securely linked together using cryptography.

Each **block** contains a cryptographic hash of the previous **block**, a timestamp, and transaction data

The timestamp proves that the transaction data existed when the **block** was created. Since each block contains information about the **block** previous to it they effectively create a chain. Linking to each other.

Blockchain transactions are irreversible, once they are recorded, the data in any given block cannot be altered retroactively without altering all the subsequent blocks *Source: wikipedia*

History of Blockchain (Con't)

- All computers have the same information updated to show that person X spent one bitcoin paying Y and have all previous transactions related to that Bitcoin
- Blockchain deducts one Bitcoin from X's ledger and transfers it to Y's ledger
- In 2013 – Ethereum created a platform to process transactions and keep permanent records. They also created smart contracts. A smart contract is a computer program that automatically executes when the conditions outlined in the smart contract are met.

The Evolution of the Web3 Ecosystem

- *Merge – Ethereum Platform – 2022/2023 – Uses 99% less energy, fewer computers involved in confirming the accuracy of a transaction*
- *NFT's are both a fad and a future store of great value for digital assets, taking physical assets and “copying” them to put into safekeeping or on display*
- *Assessing current market value of NFT's and calculating the profit of NFT sales and business related (deductible costs) will produce work for accountants*
- *2023 – SEC looking to regulate Web3, but also is CFTC, other agencies*
- *AI will change auditing practices and AICPA issuing new audit standards*
- *Some funders of Web3 taken a huge hit, Silicon Valley Bank Closed*
- *Bitcoin and Cryptocurrency up nearly 60% Jan1 – June 1, 2023*
- *AI dominance – have to use it or be left in the dust, especially if your clients do, especially for marketing, supply chain management (blockchain)*

Web 3 – Basic Practices today

- All computers have the same information updated to show that person X spent one bitcoin paying Y and have all previous transactions related to that Bitcoin via Blockchain Technology
- Blockchain deducts one Bitcoin from X's ledger and transfers it to Y's ledger
- In 2013 – Ethereum created a platform to process transactions and keep permanent records. They also created smart contracts. A smart contract is a computer program that automatically executes when the conditions outlined in the smart contract are met.

Web 3, AI and Blockchain – History in Accounting and Supply Chain Management

- Blockchain required by Walmart for all food sources to document where their food came from on which date – 2016 to the present
- 2018 – Institute for Certified Accountants wrote article on why accountants must embrace AI – 5 year head start, time to catch up. See: <https://www.ifac.org/knowledge-gateway/preparing-future-ready-professionals/discussion/why-accountants-must-embrace-machine-learning>
- TOME, AI generates “presentations” in Microsoft PowerPoint for any speech or presentation on any topic – always must be checked and enhanced by any professional giving a presentation
- Today, AI represents where you start a project...

The Impact of Web3, AI and Blockchain on The Accounting Profession

- AI automates routine tasks including bank reconciliation
- AI extracts insights from data including patterns, anomalies
- Closed AI – using algorithms on your own library of documents/data/reports
- Fraud detection – can identify unusual patterns, anomalous or suspicious transactions
- AI streamlines auditing and Blockchain protects the integrity of previous data entry and transactions so they can never be changed and basically cannot be entered incorrectly
- AI predictive analytics improves financial forecasting, can develop many scenarios creating a variety of financial projections

The Impact of Web3, AI and Blockchain on the Accounting Profession

- AI investments – number of deals where investors are investing in AI went down a little in 2022 and will go down more in 2023 because the field is already consolidating with several billion dollar valuations
- PWC projects AI to contribute \$15.7 trillion to global economy See: <https://www.pwc.com/gx/en/issues/data-and-analytics/publications/artificial-intelligence-study.html>
- See the AI Index Report from Stanford – 2023. See: <https://aiindex.stanford.edu/report/> which reported:
- **Companies that have adopted AI continue to pull ahead.**

The Impact of Web3, AI and Blockchain on the Accounting Profession

- AI software now available from numerous vendors
- PDF from China titled “The Impact of Artificial Intelligence on Accounting” – See: <https://www.atlantis-press.com/article/25903730.pdf>
- Much broader acceptance of AI by people in China than in US
- Understand the reluctance of your peers and clients in using AI
- AI now being taught in many colleges and universities, not high school
- Fastest takeup in 2023 of generative AI of any technology in global history
- Generative AI can write reports, but beware if you use open source and not closed sources that you put into your own library from which you pull the AI generated report

The Impact of Web3, AI and Blockchain on the Accounting Profession

- Impact on Accounting Jobs – World Economic Forum projects AI will lead to net job creation, just as Microsoft Excel led to a 75% increase in the use of human bookkeepers, AI will lead to many high skilled accounting jobs
- AI can provide a system of “continuous auditing” rather than spot auditing
- Virtual accounting services, given a boost in the pandemic and before that in the move to “outsource financial recordkeeping and data tracking services” to lower wage countries, will be given another boost by AI in 2023-2025. See: <https://cmaexamacademy.com/artificial-intelligence-in-accounting/>
- AI = quick answers, not always right, but getting better to your questions that have been addressed on the web, written in plain English
- AI great for background information on most any topic or organization or individual, though the more granular you get, higher probability of error

The Impact of Web3, AI and Blockchain on the Accounting Profession

- Every Accounting Firm must have an AI strategy, AI use policy, AI disclosure policy, AI policy to keep client information confidential, and AI Ethics policy
- Accountants can help their clients write their AI policies
- Accountants can use AICPA “staff augmentation” rules to help a client for a short period of time (30 days max) develop AI strategy, set up and deploy AI practices and measure early impact of AI on productivity, client satisfaction and financial results
- Government regulations will be coming in US. EU already has many of these regulations
- Smart Contracts are “self-executing” and loaded with key embedded decisions based on data generated and submitted to or “extracted by” the smart contract
- Beware – many fraudulent AI, Web3 types of deals, transactions

Polling Question 2

Reasons why my colleagues are not using AI, Web3 and Blockchain are:

- A.** They do not have the skills or knowledge
- B.** They feel threatened by the technology
- C.** There are too few clear role models or use cases
- D.** All of the above



Questions to Expect from Accounting Clients About Web3

- Is cryptocurrency taxable?
 - Are currency swaps a taxable event?
 - Are NFTs taxable?
- Can I do a “wash sale” with crypto? Yes, but...Congress is seeking to close this since “wash sales” with securities require a waiting period
- How do we harvest losses?
- Are there capital gains reduction strategies?
- What happens if my assets get stolen from my wallet?
- Can I create a company to be a professional trader?

Enterprises are Leveraging Web 3 Technology and The Need To Budget, Account, and Report This

- Nike purchases RTFKT
- Tiffany's purchases CryptoPunks
- Coca-Cola
- Coachella
- JP Morgan
- See Forbes article:
<https://www.forbes.com/sites/forbesbusinesscouncil/2023/02/10/five-web3-trends-to-watch-in-2023/>
- Think about digitizing collectibles for a billion dollar non-profit religious organization, selling the NFT's, developing budgets, avoiding, if possible, unrelated business income taxes, capturing costs and revenues over 100 year life

NFTs, Tokens, Stablecoins, Cryptocurrencies and DAOS

NFT-non fungible token is a record on a blockchain associated with a particular digital or physical asset. The ownership of an NFT is recorded on the blockchain and can be transferred by the owner allowing NFTs to be sold and traded

Tokens are units of value that blockchain-based organizations or projects develop on top of existing blockchain networks. While they often share deep compatibility with the cryptocurrencies of that network they are a wholly different digital asset class

Stablecoins-backed by real assets and their value is pegged to a nation's currency

DAOS – Distributed Autonomous Organizations, use smart contracts, participants are members and can vote on all key issues – still working out the bugs

NFT Real World Examples

- Collectible digital art/music stored, bought and resold on the internet
- Rewards programs (Starbucks Odyssey - Polygon network)
- Experiences (concerts, restaurants) – transactions made peer to peer without bank/intermediary/credit card
- POAP (Proof Of Attendance Protocol) - communities, education, resources
- Real Estate: Escrow, title, county records, etc.
- Estate planning, licensure (DLs, marriage, birth)
- Amazon announces that it will start selling NFT's

NFT Real World Utility

- Verifying authenticity – eliminate the \$3T counterfeit market
- Identity verification – nearly 50 million consumers have their identity stolen each year
- Financial transactions. In a real estate transaction instead of using paper proof of ownership. NFTs can digitize the records and using smart contracts handle escrow, title transfer and other tasks
- Voting on the Blockchain. $\frac{1}{3}$ of Americans believe there was vote fraud in the 2022 election
- Event ticketing – First buy the artist's NFT, then eligible to buy concert tickets
- NFTs may be synonymous with digital art and crypto gaming but their use extends well beyond that. *Source: Zenledger*

Tokens Real World Utility

- Tokenization of Precious Metals – Ownership Interests
- Tokenization of Real Estate Assets in the case of fractional ownership
- Tokenization of Logistics
- Reward contributors to blockchain projects and DAOs. A form of reward for value creation
- Collectibles can be digitized and sold in large numbers/limited editions
- *Memberships can be NFT's: See: <https://www.flyfishclub.com/> and others coming in the future, allows for solid recordkeeping, Web3 experience*

Stablecoins Real World Utility

- Stablecoins' value is “tied” to a fiat currency. They serve 2 significant roles:
- One is a unit of account for trading platforms both centralized offshore exchanges and decentralized financial markets
- Use case 2 is intermediate-term savings mechanism for people in emerging markets or countries with failing currencies
- Tether is the largest existing stablecoin. Market Cap 75B. USDC market cap is 37.7B. One major use of stablecoins is to bridge between official currencies (fiat) and crypto-assets. These stablecoins are “owned” by private companies.
- EURS is a digital token developed by STATIS that is pegged to the Euro. It is the world's largest Euro backed stablecoin

Cryptocurrencies Real World Utility

- “Banking the unbanked.” Creating a digital wallet to transfer Bitcoin and other cryptocurrencies (there are over 10,000 active cryptocurrencies) offers people access to a store of transferable value independent of the traditional banks and without traditional banking fees
- Create, manage efficient and easy to use “Loyalty Points” and rewards programs – Getpercs on Shopify - which require significant accounting processes
- Low cost of banking for hundreds of millions of people who do not have access to traditional banking structures
- Note Dee Hock who started VISA wanted VISA to “improve the exchange of value” and be a decentralized network. He achieved the first objectives, but could not achieve the second objective

Current Accounting Treatments in Web3

- What are the digital assets that need to be accounted for:
 - NFTs
 - Tokens (ERC-20 vs. ERC-721)
 - Cryptocurrencies – valuation and taxes
 - Stablecoins
 - Valuation of digital assets on the balance sheet
- Taxes
 - How Distributed Autonomous Organizations (DAO's) will be taxed
- Rules and regulations: US Differences versus Other Nations
 - FASB, SEC, CFTC all regulating Web3, Blockchain Technology

Polling Question 3

How do I get Web3, AI and Blockchain on meeting agendas?

- A.** Write a background white paper and distribute
- B.** Show competitors are using these technologies
- C.** Create a committee to explore business strategies
- D.** Hire a consultant to advise my organization



The background features a complex network of glowing teal and orange lines and shapes, resembling a digital or financial data visualization. The lines are of varying thickness and opacity, creating a sense of depth and movement. Some lines form a grid-like pattern, while others are more chaotic and overlapping. The overall color palette is dominated by dark teal and deep blue, with bright orange and yellow highlights that stand out against the darker background.

How do you expand your business using Web3, AI and Blockchain knowledge and skills?

Some Do's and "Don'ts"

Expanding your Business and Influence Through Your Actions and Knowledge in Web 3

- 6 suggestions for Accounting Professionals
- 3 things to avoid.

Suggestion 1:

- Develop or expand your relationship with a University or College – know what is being taught in this area
- Build your “ecosystem” of support and daily sources of information more than most fields in accounting, find two to five “personal” sources on Twitter, internet or blogs who write daily, weekly about subjects – Trade press cannot keep up; Professional Associations cannot keep up
- Attend meet-ups, University lectures in the computer science, business and Law school
- Talk to young professionals and have them come and train your staff
- Most colleges and universities have a student run “Blockchain Society” – I attend the weekly meetings at Washington and Lee University

Suggestion 2:

- Develop a learning plan regarding learning all of the “ins and outs” between blockchain, cryptocurrency, AI and the accounting profession
- Take online courses from reputable teaching organizations
- Listen to podcasts
- Attend industry events
- Stay current on the ethical landscape as well as the regulatory landscape in this emerging field – FASB, SEC and CTFC will be issuing regulations soon
- Ask every one of your clients and potential clients about their Web3, Blockchain and AI experience, if any and what they expect their future needs to be in these fields and related accounting activities

Suggestion 3:

- Recruit Web3 experts as employees or contractors into your organization and get them to start publishing thought leadership, short articles, white papers
- Create webinars, present to others - be an educator.
- Build your own expertise and train fellow members of your organization in all key aspects of Web3 where accountants play a pivotal role

Suggestion 4:

- Adopt blockchain and digital assets into your business
- Develop a new business model for blockchain and cryptocurrency related accounting services
- Do cost/benefit analysis projects (feasibility analysis) for clients and your organization if you work internally in an organization
- Help the accounting profession (AICPA) and state, local and federal government come up with new ethical standards, new regulations and keep abreast of what is going on internationally with regulations
- Open one or two crypto wallets (some work with NFTs and some do not)

Suggestion 5:

- Develop an objective point of view about current, mid-term and long-term limitations and risks of blockchain and cryptocurrency
- Study other accounting firms and competitors regarding what they are doing in this space
- Ask your clients how you can help them in this emerging business
- Seek to recruit clients who are already considering or embarking on Web3 strategies or learning and possibly survey your clients about their Web3 intentions over the next several years...

Suggestion 6:

- Invest in your human capital and the technological capital you need to be a “player” in this emerging business opportunity
- Encourage clients and others to invest in their human capital in this field
- Invest in pilot projects to help team and clients learn
- Offer seminars and programs in this area
- Partner with experts

Caution 1: Things NOT TO DO

- Overpromise the potential of blockchain and related Web3 technologies
- Underestimate the costs and learning curve necessary to be professional in this emerging business area which leads to “under-deliver”
- Overstate your capabilities or overestimate the capabilities of your clients or the organization where you work as an accountant
- Under invest in the training and human capital of those around you who will be helping you serve your clients

Caution 2: Things Not to Do

- Do not try to convince those who believe blockchain and related technologies are a fad and not potentially beneficial
 - We did not try to convince people the typewriter, telephone, fax machine, email, social media, websites or electric cars were beneficial
- Do not invest huge sums for client development in this space – streamline how you market and educate potential clients for these services
- Do not invest substantial sums in cryptocurrency speculation
- Do not feel you have to defend every criticism of this emerging technology or respond to every negative event – there will be many

Polling Question 4

Something I could do to begin improving the adoption of AI, Blockchain or Web3 technologies in my organization or with my clients is:

- a. Create a new offering for our clients or new policy for my organization
- b. Experimenting with new AI and Web3 programs myself
- c. Doing competitive analysis to see what others are doing
- d. Establish a budget and get it approved for time/exp.

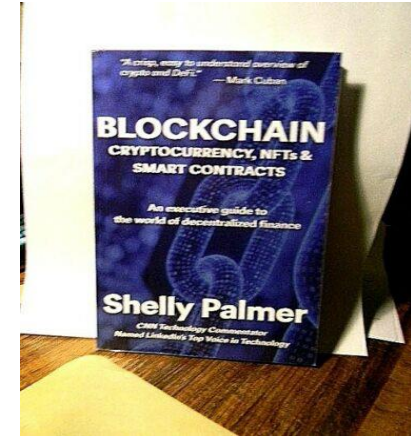


Caution 3: Things Not to Do

- Don't get discouraged this is an emerging technology. There are lots of uncharted waters.
- Think of this space as “stable.” It is emerging so plan for and be prepared for volatility in each of these areas:
 - Value of cryptocurrencies and NFT's, coming and going of Web3 companies with valuations changing, availability of investment capital, regulatory volatility and wild differences in countries and states in reg framework
- Think short-term. This is the “beginning,” so take a long run view
- Overlook learning key terms and not getting immersed at the ground-level
- Don't try to go “it alone.” This is a team sport and very complex

Resources

- Shelly Palmer's book:
- Bitcoin Whitepaper: <https://bitcoin.org/bitcoin.pdf>
- Relevant newsletters and websites including:
 - Messari.io (Crypto Bloomberg)
 - Annual Theses published every January
 - The Milk Road (Sam Parr & Shaan Puri)
 - The Pomp Newsletter (Andrew Pompliano)
 - Blockworks | Weekly <newsletter@blockworks.co>
- The “Don Ho” Rule: Click and read hyperlink in every document



Key Sources on Blockchain/Cryptocurrency

- <https://online.maryville.edu/blog/cryptocurrency-accounting/>
- See PDF article at:
[Adoption of Blockchain Technology Based Accounting Platform](#)
- <https://www.richtmann.org> › ajis › article › view - PDF by A Sharma · 2022 — Stancheva-Todorova, E. P. (2020). **Blockchain Applications** in The **Accounting** Domain. Journal of International. Scientific Publications, 19.
- <https://techjury.net/blog/blockchain-statistics/#gref>

Conclusion

- You and your organization can benefit from learning about and implementing carefully selected blockchain strategies
- The AICPA as far back as 2017 was supportive of blockchain because it realized its potential to impact how accountants work
- Regulations are coming and they will be helpful to stabilizing this “wild west environment”
- Think of Web3 as the future of the internet

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